

SPECIFICATION AMENDMENTS

Insert above the paragraph beginning at page 1, line 4:

FIELD OF THE INVENTION

Insert above the paragraph beginning at page 1, line 13:

BACKGROUND OF THE INVENTION

Replace the paragraph beginning at page 1, line 13 with:

In known electrical power steering systems ~~of this type~~, the steering wheel torque exerted by the driver when the vehicle is in motion is measured by a dedicated torque sensor. The information thus obtained is subsequently processed by an on-board computer in order to determine the set point of the torque that must be applied to the steering column by the assistance motor, for example, in the case of turning.

Insert above the paragraph beginning at page 1, line 20:

SUMMARY OF THE INVENTION

Replace the paragraph beginning at page 1, line 24 with:

In order to attain this objective, ~~the in a method according to the invention is characterized by the fact that the~~ information concerning the steering wheel torque is obtained by measurement of the angles of the steering column, at the site of the steering wheel and at the site of the assistance motor, and the set point of the torque to be applied by the assistance motor is established by comparison of the two angle measurements while taking into account the rigidity of the steering column between the two angle measurement sites.

Replace the paragraph beginning at page 1, line 31 with:

According to ~~one characteristic of~~ the invention, the angle, speed, and acceleration of the steering wheel and the position, speed, and acceleration of the assistance motor acting on the lower part of the steering column are measured.

Replace the paragraph beginning at page 1, line 36 with:

According to yet another characteristic of the invention, the load on the steering wheel is computed by comparison of the positions of the two angle sensors; the variation of the steering wheel load is computed with respect to the speeds of rotation between the two sensors; PID-type filtering is done on the two measurements made, and the resulting information is used as torque information for computation of the set point of the assistance torque that must be applied to the steering column by the assistance motor.

Replace the paragraph beginning at page 2, line 10 with:

According to yet another characteristic of the invention, in the case of a positive response, a computation of a new compensation with regard to the midpoint position of the steering is done, and, if necessary, a recomputation of the value of the play in the reducing gear associated with the motor is done, and the program, after storing this information, is brought to the operation of measuring the magnitudes.

Replace the paragraph beginning at page 2, line 25 with:

The electrical power steering system for implementation of this method ~~is characterized by the fact that it~~ includes an angle sensor for the steering wheel and an angle sensor at the site of the lower part of the steering column as well as a device for computation from the measured angles of the set point of the assistance torque to be applied by the motor to the steering column.

Replace the paragraph beginning at page 3, line 3 with:

According to yet another characteristic of the invention, the rod is ~~produced in the form of~~ a controlled torsion part of the steering column.

Replace the paragraph beginning at page 3, line 5 with:

According to yet another characteristic of the invention, the structure of the steering column itself is ~~realized in the form of~~ a torque rod.

Insert above the paragraph beginning at page 3, line 7:

BRIEF DESCRIPTION OF THE DRAWINGS

Insert above the paragraph beginning at page 3, line 16:

DETAILED DESCRIPTION OF THE INVENTION

Replace the paragraph beginning at page 4, line 3 with:

It emerges from these figures that lower part 13 of the steering column is produced in the form of a tubular piece which coaxially surrounds a part of torque rod 16, and that the upper end of the latter is connected at 17 with another tubular piece 24 which engages by its lower part, coaxially, in upper portion 26 of piece 13 forming the lower part of the column, whose upper portion is consequently ~~hollowed~~ hollow in order to receive piece 24.

Replace the paragraph beginning at page 5, line 16 with:

After verifying the validity of the acquired magnitudes, a first computation is made using a computer that allows one to obtain the load exerted on the steering wheel by comparison of the angular positions between the two sensors, advantageously with integration of the play of the reducing gear during a change of the direction of rotation. Then, by means of a second computation, the variation of the steering wheel load is established by comparing the speeds of rotation between the two sensors. Then, ~~a~~ PID (proportional, integral, differential) ~~type of~~ filtering is applied to the two measurements made, taking into account the preceding information. The resulting information concerning the torque is then used to compute the assistance that must be provided by motor 4.

In re Appln. of Jean-Luc DEVILLE
Application No. Unassigned

Replace the paragraph beginning at page 6, line 2 with:

Of course, various modifications can be made on the DAE system ~~proposed by~~ of the invention, with regard to the structure as well as the level of utilization. Thus, in the known power steering systems equipped with a torque sensor and provided with an already existing or added steering wheel angle sensor 30, it would be possible to use the method according to the invention without involvement of the torque sensor, for example, in case of a defect in the measurement information of this sensor, as a back-up and replacement solution so that the vehicle can continue its travel.